

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/JP03/14347

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> Int.Cl? C23C10/28, F28F21/08		
According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) Int.Cl? C23C10/28, F28F21/08, C22C21/00		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Japanese Utility Model Gazette 1926-1996, Japanese Publication of Unexamined Utility Model Applications 1971-2004, Japanese Registered Utility Model Gazette 1994-2004, Japanese Gazette Containing the Utility Model 1996-2004		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 53-23548 B2 (SUMITOMOKEIKINZOKU K.K.) 1978.07.15 line27 column1-line33 column3, table1 no.10 (Family:none)	1-17
Y	FUSYOKUBOSYOKUKYOKAI, FUSYOKUBOSYOKUHANDBOOK, MARUZEN, 2000.02.29, page325	1-17
Y	KAWAKATSU Ichiro, ROSETSUKOGAKU, ASAKURASYOTEN, 1972.06.30, page172	6, 12
Y	JP 60-24267 A (FURUKAWAARUMINIUMUKOGYO K.K.) 1985.02.06 line7 column4-line2 column5 (Family:none)	7-13
Y	US 5005285 A (SANDEN CORPORATION) 1991.04.09 lines20-27 column5 & JP 61-186164 A	7-13
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed		
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search  18.02.2004	Date of mailing of the international search report  02.3.2004	
Name and mailing address of the ISA/JP  <b>Japan Patent Office</b> 3-4-3, Kasumigaseki, Chiyoda-ku, Tokyo 100-8915, Japan	Authorized officer  <b>HIBINO TAKAHARU</b>	4E 3032
Telephone No. +81-3-3581-1101 Ext. 3425		

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## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 1-145487 A (FURUKAWAARUMINIUMUKOGYO K.K.) 1989.06.07 (Family:none)	14,15
A	JP 2-55664 A (FURUKAWAARUMINIUMUKOGYO K.K.) 1990.02.26 (Family:none)	1-17
A	JP 2000-144290 A (FUKAWADEN KIKO GYO K.K.) 2000.05.26 (Family:none)	1-17